

Appl. No.: 10/611,522

Amdt. Dated December 15, 2005

Response to Office Action of September 20, 2005

REMARKS/ARGUMENTS

Claims 1-20 are currently pending in the application. Claims 1-20 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,768,457 issued to Lindenmeier in view of U.S. Patent No. 6,085,076 issued to Lindsay et al.

Applicants respectfully traverse the rejections set forth above. Applicant has amended independent claims 1, 15 and 20 to state that the peak gains of the plurality of directional antennas are oriented radially and outwardly about an axis. Support for the foregoing claim amendments can be found in Figures 6A and 6B, for example, as well as the specification at page 5, lines 18-27.

Neither Lindenmeier nor Lindsay disclose or suggest the claimed invention. For example, neither Lindenmeier nor Lindsay teaches a plurality of directional antennas having substantially non-overlapping antenna patterns, and whose respective peak gains are oriented radially and outwardly about an axis. Rather, Lindenmeier appears to disclose a plurality of antennas disposed around circular perimeter or similar arrangement, where the peak gains of the antennas are oriented to point inwardly (see Figures 5b, 7, 8a, 8b, 9a&b, and 10a&b, and accompanying description of Lindenmeier). In addition, neither Lindenmeier nor Lindsay disclose or suggest a plurality of directional, radially-oriented antennas wherein the peak gains of the plurality of antennas are offset relative to each other at an angle substantially equal to $360/N$, where N is the number of directional antennas in the plurality of directional antennas. Furthermore, Lindenmeier does not appear to disclose or suggest the selection of a directional antenna for receiving the remainder of the wireless frame. In addition, Lindsay discloses a system that selects an antenna based in part on examination of the preamble of a time frame in a TDM system. However, Lindsay does not disclose selection of a directional antenna during receipt of the preamble of a wireless frame. Rather, Lindsay discloses a system where signal attributes

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detected during the preamble form part of the antenna selection decision for the next TDM frame. For example, antenna selection is also based on evaluation of error checking codes (e.g., CRC), which requires receipt of the entire frame.


Furthermore, Lindenmeier teaches away from the present invention. Lindenmeier teaches a system that is directed to maximizing the probability of radio frequency coverage over a given area by using multiple, overlapping antenna patterns. The teachings of Lindenmeier teach away from the present invention. Specifically, the present invention minimizes the overlap in antenna patterns by orienting the antennas radially about an axis and directing the peak gains, radially and outwardly about the axis, at angles intended to minimize antenna pattern overlap. The resulting sectorization increases the signal to noise ratio (SNR) of a signal between two wireless nodes, especially under heavy load conditions. Since better SNRs increase the effective data rate, this arrangement increases the capacity of the network. However, the increase in capacity generally occurs at the expense of radio frequency coverage.

In light of the foregoing, Applicant believes that all currently pending claims are presently in condition for allowance. Applicant respectfully requests a timely Notice of Allowance be issued in this case. If the Examiner believes that any further action by Applicant is necessary to place this application in condition for allowance, Applicants request a telephone conference with the undersigned at the telephone number set forth below.

Date: December 15, 2005

Customer Number: 30505
Law Office of Mark J. Spolyar
38 Fountain St.
San Francisco, CA 94114
415-826-7966 / 415-480-1780 fax

Respectfully Submitted,
LAW OFFICE OF MARK J. SPOLYAR


Mark J. Spolyar
Reg. No. 42,164